ABSTRACT OF THE DISCLOSURE

A method of fabricating integrated circuits includes forming MOSFETs with gate electrodes of a first composition, and sidewall spacers along laterally opposed sides of those gate electrodes, removing the gate electrodes of the first composition, and replacing those gate electrodes with a gate electrode structure having at least two layers of metal. In a further aspect of the present invention, complementary metal oxide semiconductor integrated circuits are fabricated by replacing n-channel transistor gate electrodes with gate electrodes having at least a first metal and a second metal, and further replacing the p-channel transistor gate electrodes with gate electrodes having a third metal and a fourth metal. The first and second metal combination includes, but is not limited to, TiN and Al. The third and fourth metal combination includes, but is not limited to, TaN and Ni; TaN and Pd; and TaN and Pt.